SUBJECT INDEX

Vol. 141A, Nos. 1-4

Absorption, 29
Acclimation, 164
ACE activity, 169
ACE genotype, 169
Acipenser naccarii, 183
α-Crystallin, 60
Adipocyte, 108
Adipogenesis, 108
Adrenal, 100
African, 169
African catfish, 164
African elephant, 223
Air-breathing, 15, 87
Alligator 8

Alligator mississippiensis,
Allometry, 430
Amphibian, 298, 381
Amphipod, 94

Amphipod, 94	
Angiotensinase, 336	
Anodonta cygnea, 319	
aP2, 108	
Apis mellifera, 362	

Apoptosis,	213	
Argopecten	purpuratus,	153

Ash, 48	
Asphyxia,	15
Athletes,	169

β-adre	enoce	ptor	(β-AR),	164	
Baltic	Sea	94			

Daitie Sea, 74	
Behavioral development, 362	
Binding affinity (K_d) , 164	
Biomineralization, 319	
Birds, 257, 292	
Bivalve, 215	

Blood, 35	
Blood-brain barrier,	271
Body fat, 146	
Brackish waters, 94	

Brain	morp	hology,	327
Brain	size,	327	
Breath	test	230	

Breathing pattern, 133	
Broiler chicken, 122, 146	
Brush border membranes 4	50

Calcium, 48 Captivity, 100 Cardiac, 164 Cardiovascular, 391 Cardiovascular system, 200 Catecholamines, 15

Catfish, 87 CD147, 29 C/EBP, 108 Ceca, 292 Cellulase, 223

Ceratophrys cranwelli, 298

CFTR, 176 Channel catfish, 42 Chicken, 108 Chloride cells, 183 Cholesterol, 191 Cilia, 116

Claris gariepinus, 164 Classification, 264 Clutch effect, 200 Cold tolerance, 60 Contaminants, 8 Convection, 372

Corticosterone, 100, 305, 381 Corticotropin-releasing factor, 305, 381

Cortisol, 353

Counteracting osmolytes, 22 Crassostrea gigas, 215 Crotalus horridus, 70

Data-loggers, 210

Development, 29, 42, 76, 271, 372, 391,

430

Developmental stages, 247 Dicentrarchus labrax, 116

Diet, 48, 298

Dietary carbohydrate, 257

Diets, 461 Diffusion, 372 Digestion, 210, 280 Diurnality, 362 Domestication, 353

Ecdysis, 70

Electron microscopy, 310 Embryo, 430, 440 Embryogenesis, 42 Emydidae, 470 Endurance, 169 Energetics, 210 Energy balance, 381 Energy budget, 461 Enrichment, 327

Enterotoxigenic diarrhoea, 476 Environmental stress resistance, 60 Enzymatic digestive activity, 153

Epigenetic effect, 200 Erythrocyte, 35, 87 Estradiol-17β, 54 Eurasian perch, 353 Eurytherm, 1

Evaporative water loss, 70

Evolution, 176
Excretion, 48
Exercise, 239
Extrapallial fluid, 319

Fasting, 146 Fat sand rats, 48 Fatty acid, 223

Fatty-acid composition, 183 Feeding behaviour, 153 Feeding frequency, 470 Fetus, 271, 430

Fetus, 271, 430 FFA, 15 Fibronectin, 215

Fish, 15, 87, 176, 327, 401, 440

Fish ear, 116 Flight metabolism, 362

Food, 153 Food intake, 146, 381 Food type, 470 Foraging ecology, 210 Forebrain, 327

Galactosyllactose, 223 Gammarus oceanicus, 94 Gastric pH, 210 Gastropods, 230

Gene expression, 76, 108, 247

Genetics, 169 GFAP, 140 GI, 292 Gill, 183, 401 Gills, 176 Glia, 140 Glucose, 353

Glucose transport, 257

Glycerol-3-phosphate dehydrogenase, 108

Glycine betaine, 22

SUBJECT INDEX

Vol. 141A, Nos. 1-4

Absorption, 29
Acclimation, 164
ACE activity, 169
ACE genotype, 169
Acipenser naccarii, 183
α-Crystallin, 60
Adipocyte, 108
Adipogenesis, 108
Adrenal, 100
African, 169
African catfish, 164
African elephant, 223
Air-breathing, 15, 87
Alligator 8

Alligator mississippiensis,
Allometry, 430
Amphibian, 298, 381
Amphipod, 94

Amphipod, 94	
Angiotensinase, 336	
Anodonta cygnea, 319	
aP2, 108	
Apis mellifera, 362	

Apoptosis,	213	
Argopecten	purpuratus,	153

Ash, 48	
Asphyxia,	15
Athletes,	169

β-adrenoceptor		(β-AR),	164			
	Baltic	Sea	94			

Daitie Sea, 74	
Behavioral development, 362	
Binding affinity (K_d) , 164	
Biomineralization, 319	
Birds, 257, 292	
Bivalve, 215	

Blood, 35	
Blood-brain barrier,	271
Body fat, 146	
Brackish waters, 94	

Brain	morp	327	
Brain	size,	327	
Breath	test	230	

Breathing pattern, 133	
Broiler chicken, 122, 146	
Brush border membranes 4	50

Calcium, 48 Captivity, 100 Cardiac, 164 Cardiovascular, 391 Cardiovascular system, 200 Catecholamines, 15

Catfish, 87 CD147, 29 C/EBP, 108 Ceca, 292 Cellulase, 223

Ceratophrys cranwelli, 298

CFTR, 176 Channel catfish, 42 Chicken, 108 Chloride cells, 183 Cholesterol, 191 Cilia, 116

Claris gariepinus, 164 Classification, 264 Clutch effect, 200 Cold tolerance, 60 Contaminants, 8 Convection, 372

Corticosterone, 100, 305, 381 Corticotropin-releasing factor, 305, 381

Cortisol, 353

Counteracting osmolytes, 22 Crassostrea gigas, 215 Crotalus horridus, 70

Data-loggers, 210

Development, 29, 42, 76, 271, 372, 391,

430

Developmental stages, 247 Dicentrarchus labrax, 116

Diet, 48, 298

Dietary carbohydrate, 257

Diets, 461 Diffusion, 372 Digestion, 210, 280 Diurnality, 362 Domestication, 353

Ecdysis, 70

Electron microscopy, 310 Embryo, 430, 440 Embryogenesis, 42 Emydidae, 470 Endurance, 169 Energetics, 210 Energy balance, 381 Energy budget, 461 Enrichment, 327

Enterotoxigenic diarrhoea, 476 Environmental stress resistance, 60 Enzymatic digestive activity, 153

Epigenetic effect, 200 Erythrocyte, 35, 87 Estradiol-17β, 54 Eurasian perch, 353 Eurytherm, 1

Evaporative water loss, 70

Evolution, 176
Excretion, 48
Exercise, 239
Extrapallial fluid, 319

Fasting, 146 Fat sand rats, 48 Fatty acid, 223

Fatty-acid composition, 183 Feeding behaviour, 153 Feeding frequency, 470 Fetus, 271, 430

Fetus, 271, 430 FFA, 15 Fibronectin, 215

Fish, 15, 87, 176, 327, 401, 440

Fish ear, 116 Flight metabolism, 362

Food, 153 Food intake, 146, 381 Food type, 470 Foraging ecology, 210 Forebrain, 327

Galactosyllactose, 223 Gammarus oceanicus, 94 Gastric pH, 210 Gastropods, 230

Gene expression, 76, 108, 247

Genetics, 169 GFAP, 140 GI, 292 Gill, 183, 401 Gills, 176 Glia, 140 Glucose, 353

Glucose transport, 257

Glycerol-3-phosphate dehydrogenase, 108

Glycine betaine, 22

Glycosaminoglycans, 319

Gobiidae, 54

Growth, 76, 353, 372, 461

Gut, 401

Habitat, 70 Habituation, 353 Haematology, 35 Haematopoiesis, 200 Haemoglobin, 35

Haemolymph, 319 Hair cell, 116 Hatchery, 327

Heart, 122, 310, 430 Heat shock proteins, 247

Heat shock proteins, 24 Heat stress, 247 Hematocrit, 264 Hemocyte, 215 Hermaphroditism, 54 Heterokairy, 391 Histofluorescence, 336

Honey bees, 362 Hsp 70 genes, 247

Hybrid, 42

Hydrodynamics, 336 Hypercapnia, 133 Hypothalamus, 146, 271 Hypoxaemia, 122

Hypoxia, 15, 87, 133, 391

I/D, 169 IGF-1R, 76 IGFBP, 76 IGF-I, 42, 76 IGF-II, 42, 76

Immune system, 100 Immunoblotting, 140

Immunohistochemistry, 54, 140, 230, 440

Inflammation, 476 Insect, 372

Insulin-like growth factor system, 76

Integrin, 215 Integument, 401

Intermediate filament, 140 Intestinal secretion, 476

Intestinal secretion, 4/6 Intestine, 257 Invertebrate, 215 Invertebrates, 140 Ion regulation, 176 Ionic concentration, 94 Ionocyte, 401

Jejunum, 257

Kallidinase, 336 K⁺-ATPase, 292 Kenyan, 169 Kidney, 292

Lactase, 450 Lake Apopka, 8 Lake Orange, 8 Lake Woodruff, 8 Larva, 430

Larvae, 401, 440 Leopard sharks, 210

Leucine aminopeptidase, 450

Leucocytes, 100 Lipid peroxidation, 239

Lipids, 70 Lipolysis, 15 Liver, 29, 440

Lizard, 100 Locomotory activity, 1 Loxodonta africana, 223

Lung, 122

 α_2 -macroglobulin, 440

Maltase, 450 Mapping, 336

Mass conversion efficiency, 298

Maternal effect, 200

MCT, 29

Megalobulimus abbreviatus, 140

Metabolic rate, 461

Methionine supplementation, 461

Microcalorimetry, 310 Microspherules, 319 Microvilli, 280 Milk, 223 Mitochondria, 264 Mollusc, 215

Molluscan, 319 Monocarboxylate transporter, 29

Morphology, 280 Morphometry, 310 mRNA, 440

mRNA expression, 176

Muscle, 440 Myocardium, 310

Na⁺, 292

Na⁺/K⁺-ATPase, 183 Na,K-ATPase, 176 Neurogenesis, 327 Neuropentide Y, 146

Neuropeptide Y, 146 Nitric oxide, 476 NKCC, 176

Nociception, 230 Noradrenaline, 15 Northern, 440

Nurse sharks, 210 Nutrition, 223

Ocadia sinensis, 470 Oligosaccharide, 223

Ontogeny, 140, 359, 372, 401, 628

Open field test, 305 Optical density, 230 Osmolality, 94

Osmoregulation, 94, 183, 336, 401

Oxalate, 48 Oxalobacter, 48 Oxidative stress, 239

Oxygen consumption, 1, 298, 470

Oxygen transport, 35, 87 Oxytocinase, 336

Pacific oyster, 215 Parasitic wasp, 60 Passerine, 292 Pathophysiology, 122 Pedal ganglia, 230 Peptidases, 336 pH, 264

Phenotypic plasticity, 359, 628 Phosphatidylcholine, 191 Phosphatidylglycerol, 191 Phosphatidylinositol, 191 Phosphatidylserine, 191 Physiological complexity, 430 Physiological regulation, 359, 628

Physiopathology, 476 Pinniped, 191

Plasma, 271 Plasma metabolites, 146 Plasticity, 327, 391 Population variation, 8 Postnatal development, 310

Posture, 133 Poult, 257 PPAR, 108 Pregnant rat, 271 Prey type, 298 Progesterone, 100 Prone position, 133 Protein, 223, 450 Proteoglycans, 319

Python molurus, 280 Radioimmunoassay, 271 Rainbow trout, 353

Rat. 310

Red flour beetle, 247 Refeeding, 146 Reindeer, 29 Reproduction, 271 Respiration, 133, 372

RGD, 215 RNase A, 22 Rumen, 29

Saccule, 116 Salinity, 94, 153 Salmonella, 476 Saltbush, 48 Scallop, 153 SCFA, 29

Seawater acclimation, 183

SEM, 116

Sensory function, 362 Serotonin, 230, 476 Serum glucose, 264 Sex change, 54 Shed epidermis, 70

Shell, 319 SIDS, 133

Subject Index

Silurus meridionalis, 461 Size allometry, 310 Skin permeability, 70 Small heat shock proteins, 60 Small intestine, 29, 280 Snail, 230 Snake, 70 Soybean protein levels, 461 SP-B, 191 Specific dynamic action, 298, 470 Starvation, 450 Stenotherm, 1 Steroid pathways, 54 Stomach, 210 Strain, 305 Stress, 100, 305

Stress protein, 60

Stress responsiveness, 353

Subterranean crustacean, 1

Supine position, 133 Surface activity, 191 Survival, 1 Swine, 264, 476 Tadpole, 381 Tarpon, 87

Tarpon, 87
TEM, 116
Temperature, 1, 164, 264, 391
The southern catfish, 461
Thermal plasticity, 1
Thermal stimulus, 230
Thermotolerance, 247, 362
Thyroxine, 8
Toll-like receptors, 42
Tracheae, 372
Training, 391

Training, 391
Tribolium castaneum, 247
Trimethylamine-N-oxide, 22

Trimma okinawae, 54 Triploidy, 35 Turbot, 35 Turkey, 76, 257

Ultrastructure, 183 Urea, 22 Urinary organs, 401

Vasopressinase, 336 Vasotocinase, 336 Ventilatory activity, 1 Venturia canescens, 60 Viviparous, 100

Western, 440 Zebrafish, 391

AUTHOR INDEX

Vol. 141A, Nos. 1-4

Aastveit, A.H., 353
Achaval, M., 140
Achaval, M., 230
Adamskaya, E.I., 271
Agugliaro, J., 70
Ai, Q., 461
Akiba, Y., 108
Alponti, R.F., 336
Andersen, Ø., 353

Babichev, V.N., 271
Bagatto, B., 391
Bai, J., 247
Baldwin, J., 87
Bakke-McKellep, A.M., 450
Bedford, J.J., 22
Bermudez, D.S., 8
Bilodeau, A.L., 42
Boit, M.K., 169
Bosworth, B.G., 42
Botes, P., 223
Braun, E.J., 292
Brittain, T., 87
Bryan, T.A., 8
Burggren, W.W., 430

Cal, R.M., 35
Camacho, T., 35
Carmona, R., 183
Cartledge, V.A., 100
Cathcart, A., 239
Charmantier, G., 401
Choi, YH., 305
Christensen, V.L., 257
Christian, K., 87
Cook, L.W., 298
Crespi, E.J., 381
Croom Jr., W.J., 257
Czarnowski, W., 94

Daniels, C.B., 191
De Waal, H.O., 223
De Wit, M., 223
Del Valle Ostos-Garrido, M., 183
Denbow, D.M., 305
Denver, R.J., 381
Do Amaral Olivo, R., 336
Domezain A 183

Elekonich,	M.N	ſ.,	362
Engelhardt,	N.,	31	0

F	arrell.	A.P., 164		
		ez-Reiriz,	M.J.,	153
F	indlay,	M.M., 11	6	
F	unkens	stein, B., 4	140	
F	uruse,	M., 305		

Gagnon, F.A., 264
Gagnon, R.E., 264
García-Gallego, M., 183
Gartrell, B., 100
Gatten Jr., R.E., 298
Gehlen, G., 140
Gibson, G., 239
Gohlke, P., 169
Gonçalves, CA., 140
Goodwin, W.H., 169
Gottfried, C., 140
Grayson, K.L., 298
Greenlee, K.J., 372
Grøndahl, M.L., 476
Guillette Jr., L.J., 8
Guitian, F.J., 35
Gunderson, M.P., 8

Hansen, M.B., 476
Hanson, L.M., 164
Harper, G., 116
Harrison, J.F., 372
Hasegawa, S., 146
Helmstetter, C., 280
Hervant, F., 1
Hodges, M.J., 327
Homma, I., 133
Hopkins, W.A., 298
Hugo, A., 223

Ip, Y.K.,	164	1
Ishihara,	Y.,	133

Ishii, H., 10	80	
Issartel, J.,	1	
Iwase, M.,	133	
Izumizaki,	M.,	133

Jentofi	, S.,	353	
Ji, X.,	470		
Jones,	S.M	., 100	

Kobayashi, T., 54
Kobayashi, Y., 54
Koho, N., 29
Krogdahl, Å., 450
Kubicka, M., 94

Labarta, U., 153
Lafreniere, J.J., 372
Lapucki, T., 94
Lavrentieva, A.V., 271
Leader, J.P., 22
LeBlanc, J.G., 264
Lema, S.C., 327
Lignot, JH., 280
Lopes-Lima, M., 319
Lovell, J.M., 116
Lowe, C.G., 210
Lu, HL., 470

Ma, XM., 470
Machado, J., 319
Macnab, A.J., 264
Mahroof, R., 247
Maijala, V., 29
Marchetti, M.P., 327
Marinho, C.E., 336
Martínez-Álvarez, R.M., 183
Matsubara, Y., 108
McMillan, L., 239
McMurtry, J.P., 76
Melnikova, V.I., 271
Michael Schoel, W., 191
Michalowska, M., 94
Miller, N.J., 191
Milnes, M.R., 8
Moate, R.M., 116
Monteiro, A.F., 230
Montgomery, H., 169
Morales, A.E., 183

Author Index

Moran, C., 169 Mori, K., 215 Mühlfeld, C., 310 Murakami, M., 146 Murena-Nunes, C., 336

Nagahama, Y., 54 Nakamura, M., 54 Nasirova, D.I., 271 Navarro, J.M., 153 Nebel, C., 401 Neven, L., 247 Nevitt, G.A., 327 Nieminen, M., 29 Norberg, H., 29 Normant, M., 94

Olkowski, A.A., 122 Olsen, J.E., 476 Onywera, V., 169 Orgeig, S., 191 Ort, D.T., 257 Osthoff, G., 223

Padgett, M., 239 Palgi, N., 48 Pan, Z.-C., 470 Papastamatiou, Y.P., 210 Payne, J., 169 Pelster, B., 200 Peterson, B.C., 42 Pierce, D., 298 Piferrer, F., 35 Pilgrim, D.A., 116 Pinshow, B., 48 Pinto, R.A., 319 Pitsiladis, Y.P., 169 Poch, S.M., 76 Pokorski, M., 133 Pösö, A.R., 29

Postle, A.D., 191 Proshlyakova, E.V., 271

Radaelli, G., 440 Ragnarsdóttir, H.B., 476 Rebhan, Y., 440 Reineke, A., 60 Reinert, H.K., 70 Renault, D., 1 Reyes, L., 292 Ribeiro, I., 319 Richards, M.P., 76 Richter, J., 310 Roberts, S.P., 362

Saito, S., 305 Samuelsson, L.M., 22 Sanz, A., 183 Sapronova, A.Y., 271 Sato, K., 108 Schmiedl, A., 310 Schulte, P.M., 176 Schürch, S., 191 Schwerte, T., 200 Scott, G.R., 176 Scott, R.A., 169 Secor, S.M., 280 Seymour, R.S., 87 Silveira, P.F., 336 Singer, D., 310 Skadhauge, E., 476 Skeldon, K., 239 Smith, R.A.J., 22 Subramanyam, B., 247 Sugahara, K., 146 Sunobe, T., 54 Sutherland, R., 239 Suvarna, S., 257 Swarowsky, A., 230

Tachibana, T., 305 Takahashi, K.G., 215 Terahara, K., 215 Todd, M.J., 298 Torjesen, P.A., 353 Tubbs, C., 8

Ugrumov, M.V., 271 Unmack, M.A., 476

Van den Thillart, G.E.E.J.M., 15 Van Heeswijk, J.C.F., 15 Van Pelt, J., 15 Varsamos, S., 401 Vatnick, I., 48 Vernon, P., 1 Vidal, S., 35 Voigt, S., 200 Voituron, Y., 1

Ward, S., 239 Wells, R.M.G., 87 Wilson, R.H., 169 Wojnarowicz, C., 122 Woodward, A.R., 8 Wyse, C., 239

Xavier, L.L., 230 Xie, X., 461

Yan Zhu, K., 247 Yoshizawa, F., 146

Zambotti-Villela, L., 336 Zancan, D.M., 230 Zhou, W., 146

